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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/253,638 02/19/99 OGURO

K 1217-990257

EXAMINER

IM52/0615

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PITTSBURGH PA 15219-1818

ZITOMER, F
ART UNIT PAPER NUMBER

10

1713
DATE MAILED:

06/15/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/253,638

Applicant(s)

Oguro et al.

Examiner

Fred Zitomer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on Apr 2, 2001

2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-7 is/are pending in the application.

4a) Of the above, claim(s) 2-7 is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☒ All b) ☐ Some* c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☐ Notice of References Cited (PTO-892)

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

19) ☐ Notice of Informal Patent Application (PTO-152)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

20) ☐ Other:

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1.

This responds to the communication of April 2, 2001. The objection of record to the specification is withdrawn in view of applicant's amendments. The rejection of record of claim 1 under 35 U.S.C. 102(b) is replaced with a new rejection under 35 U.S.C. 102(b) or in the alternative under 35 U.S.C. 103(a) as stated below. The rejection of record of claim 1 under 35 U.S.C. 103(a) is maintained as stated below. No claim is allowed.

2.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3.

Claim 1 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Shahinpoor et al, WO 97/26039.

Shahinpoor teaches preparing polymeric actuators by conducting present steps ⁱ(i) to (iii) 78
[page 3, line 24 - page 7, line 18]. The options of changing the order and/or repeating steps are disclosed [see e.g. page 7, lines 12-13; page 6, lines 8-11; page 5, lines 6-30; claim 82]. The disclosures of Shahinpoor are within the language of the instant claims.

Assuming *arguendo* that the rejection is removed from the scope of Section 102 by the failure of Shahinpoor to teach a specific embodiment wherein the instant process steps are repeatedly conducted the claimed invention is obvious for at least the following reasons:

- as noted above the option of repeating steps is clearly disclosed by the reference.

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- as acknowledged by applicant the purpose of repeating steps is to increase contact area and thickness of the metal surface. Clearly, one of ordinary skill in the art would recognize that additional applications of metal would accomplish the objective.

- the present claim lacks limitations relating to coating area, coating thickness or concentration of metal complex solution. Absent such limitations the claimed process can not be said to afford unexpected results against thicker or larger coatings prepared by merely increasing the concentration and/or contact time of said solution.

4.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oguro et al., US 5,268,082, taken with Vanderborgh et al, US 4,804,592.

Oguro teaches producing polymeric actuators comprising a pair of metal electrodes attached by various methods including plating, vacuum deposition, sputtering etc. to opposite surfaces of an ion exchange resin membrane [Abstract; column 2, lines 43-61]. The patent literature is replete with references teaching depositing free metals including platinum, palladium, gold, rhodium and/or ruthenium on electrode surfaces from salt solutions by reduction with chemical reducing agents including the reducing agents set forth in applicants' disclosure. Vanderborgh for example teaches depositing said metals onto electrode substrates including ion exchange resins with moderate reducing agents such as hydrazine [column 9, lines 21-37; claims 5-9; 18-20, 27-29 and 36]. Oguro fails to disclose instant step (ii), i.e. depositing a metal on the surface of an ion exchange resin by reduction. It would have been obvious to deposit a metal on

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the surface of an ion exchange resin by reducing a metal ion because Vanderborgh teaches the embodiment for the same class of substrates disclosed by Oguro.

Applicant's arguments filed April 2, 2001 have been fully considered but they are not persuasive. The basis of said arguments is that Oguro and Vanderborgh, alone or in combination, fail to teach repeatedly conducting present steps (I) to (iii). The argument is not compelling because one of ordinary skill in the art would understand from the totality of the information conveyed by the references to repeat the steps according to the area and thickness of the coating desired according to the need at hand because that is the state of the art.

More directly, the present process relates to preparing metallic coatings of unspecified area and thickness by depositing and reducing metallic complexes from solutions of unspecified concentration for an unspecified period of time on ion exchange resins. While neither reference discloses repeating the instant process steps the examiner takes official notice that coating procedures of the type described by the references typically rely on repeated applications and/or control of application time and flux, i.e. concentration of metal, to obtain the coating coverage desired. Witness e.g. Shahinpoor at page 5, line 27 - page 6, line 2. Accordingly, the embodiment of repeating steps is obvious and not deemed to impact patentability.

Further in this regard, it is well settled that process variables relating to reaction conditions not disclosed directly by either reference are within the broad teaching of the prior art which absent the showing of an unexpected result are not deemed to impact patentability. MPEP 2144.05(b). In the present case, as noted above, all the claimed process steps are known and

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nothing on this record shows criticality for repeating the steps for the purpose of realizing a new or unexpected result(s) versus performing the same steps for extended periods of time or with more concentrated complex solutions.

5.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Zitomer whose telephone number is (703) 308-2461. The examiner can normally be reached Monday through Friday from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful David Wu can be reached at (703) 308-2450. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3599.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2351.



FRED ZITOMER, PHD
PRIMARY EXAMINER
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Zitomer/fz
June 14, 2001